

No. 738,108.

PATENTED SEPT. 1, 1903.

G. H. HENKEL.
WINDOW SCREEN.

APPLICATION FILED SEPT. 29, 1902.

NO MODEL.

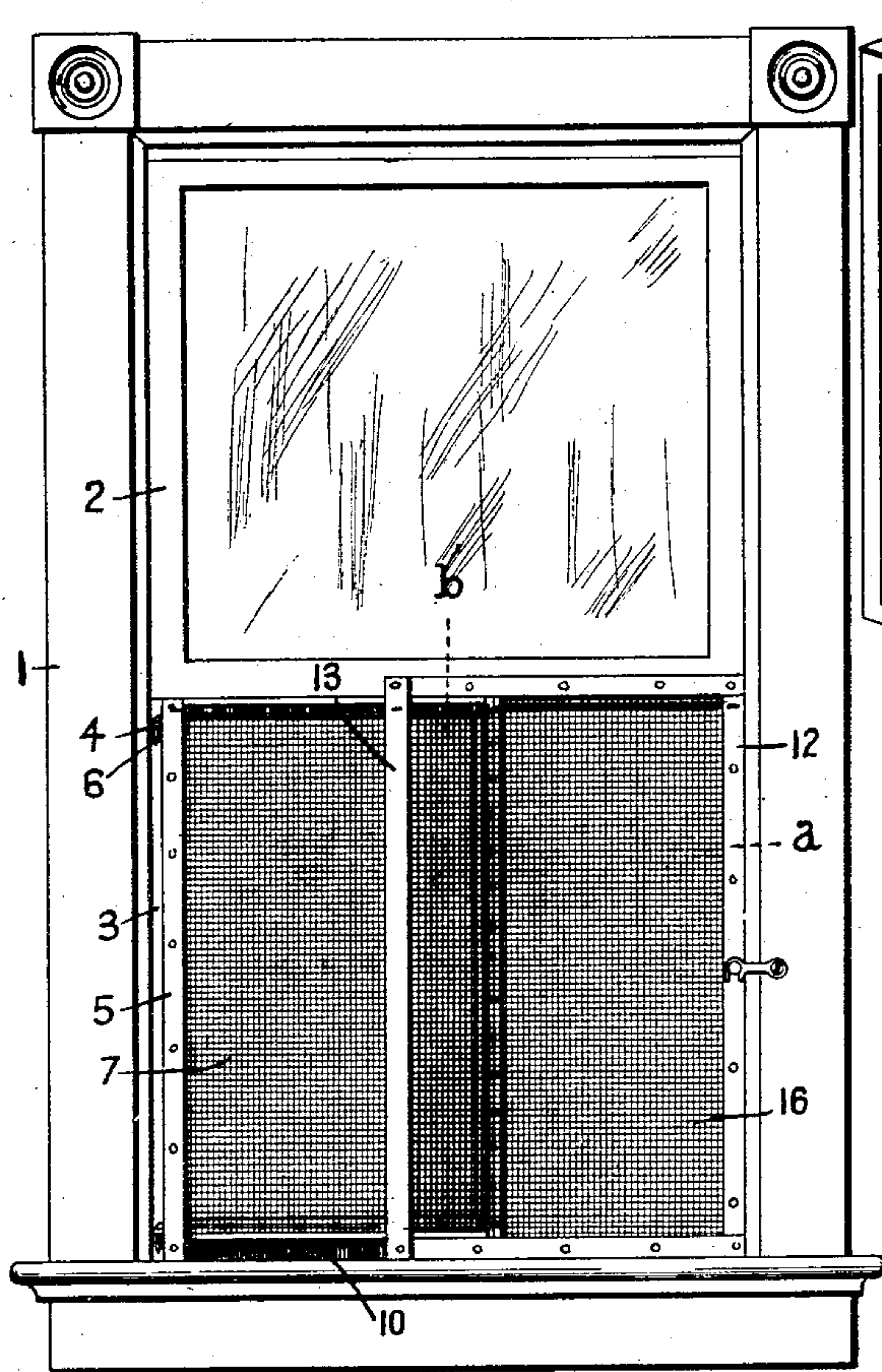


Fig. 1.

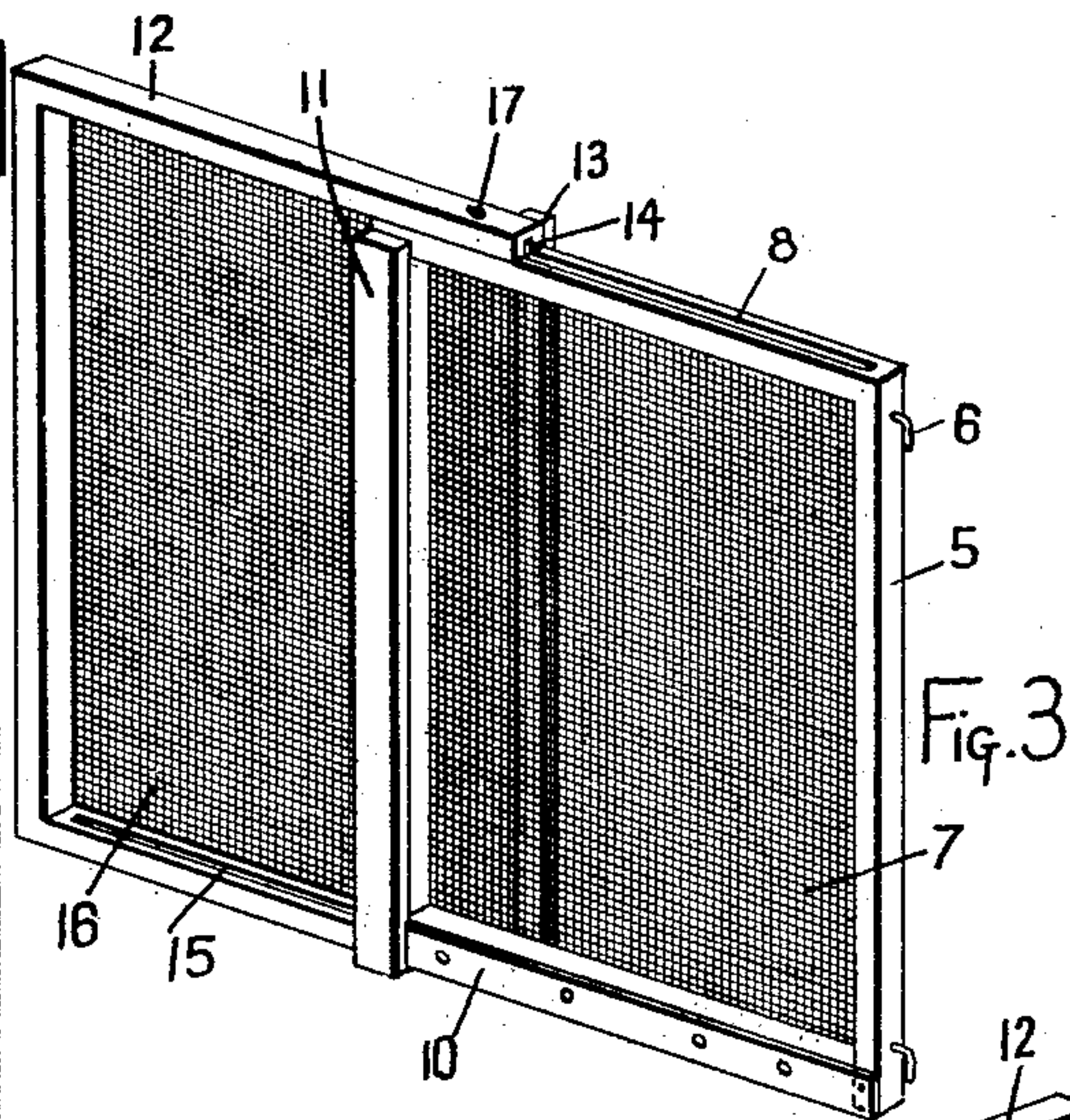


Fig. 3.

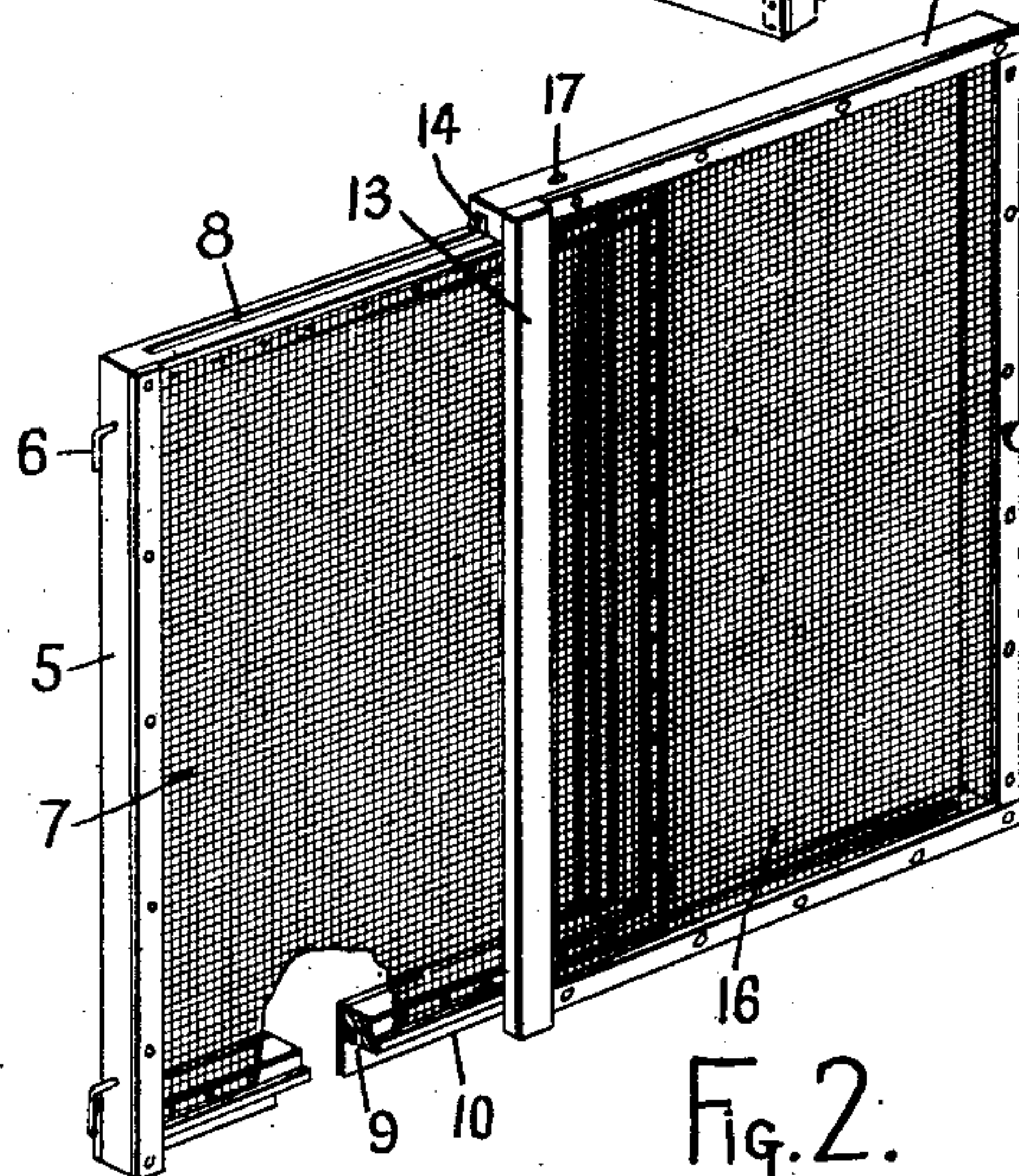


Fig. 2.

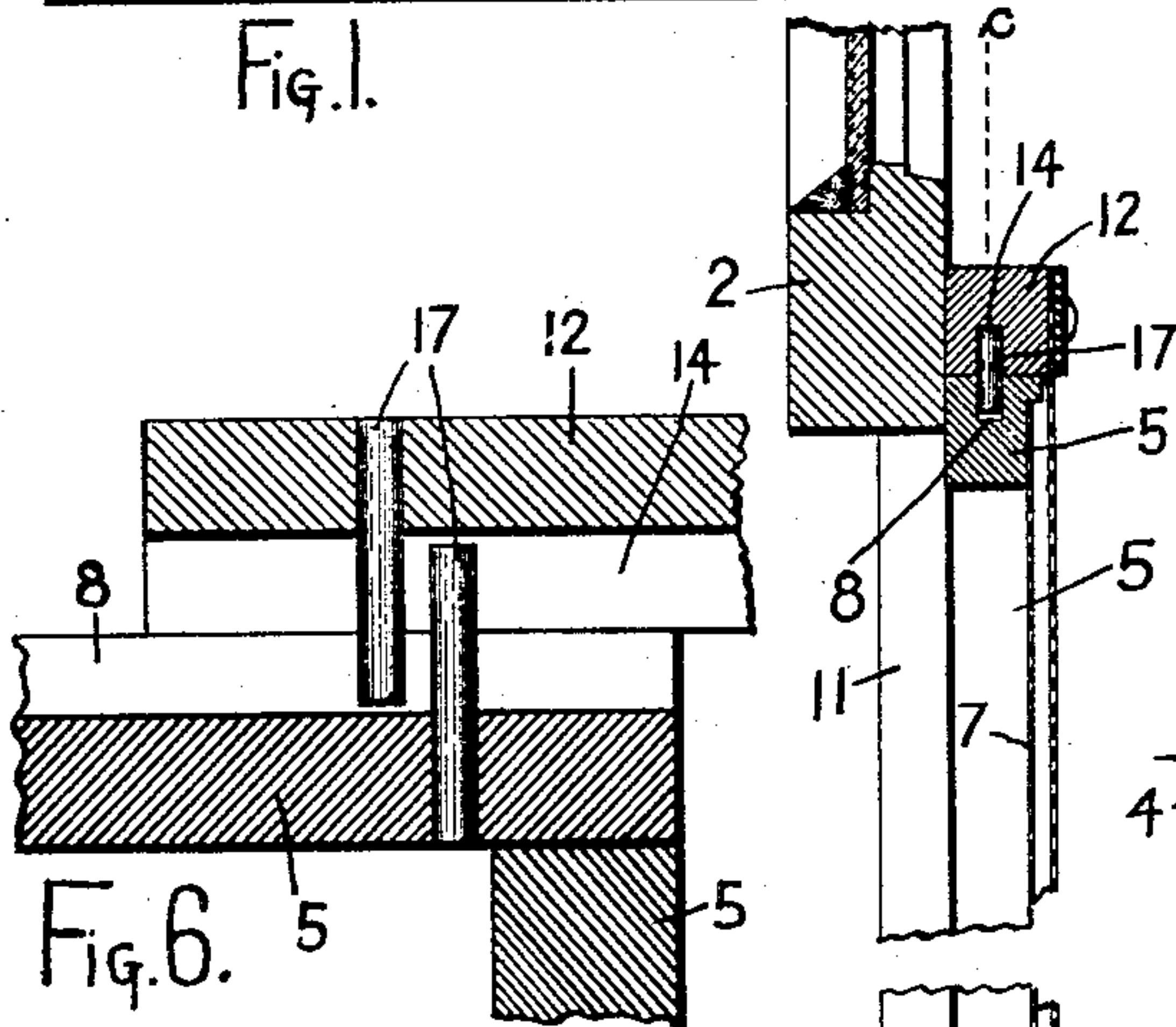


Fig. 6.

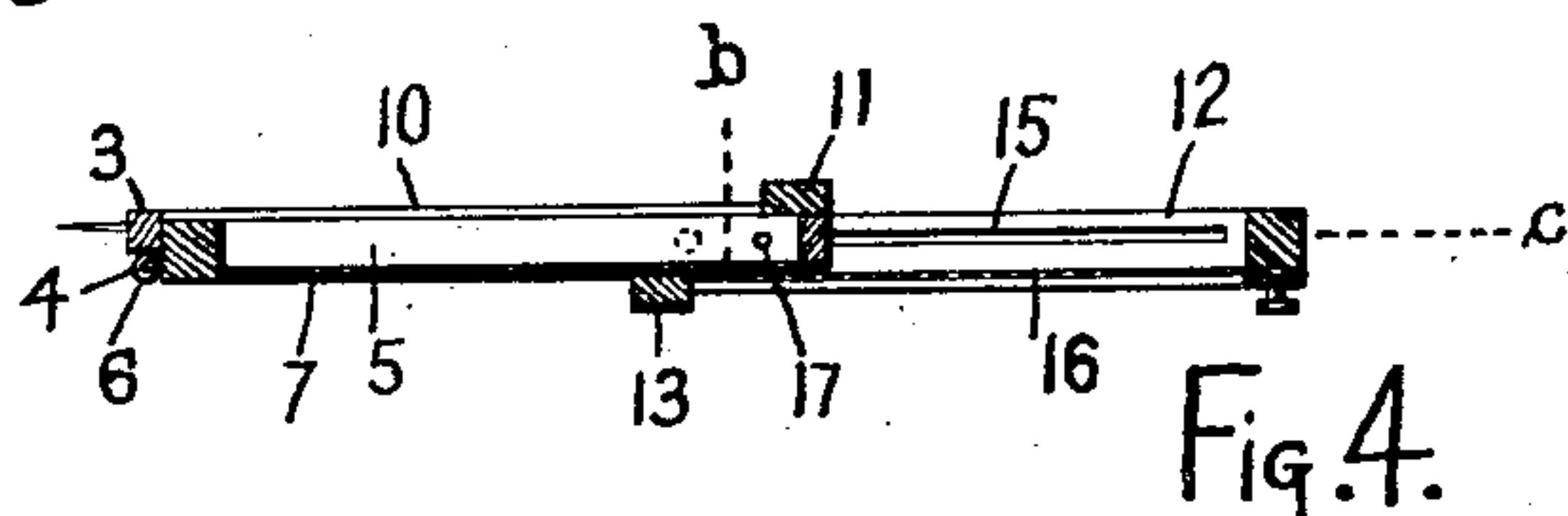


Fig. 4.

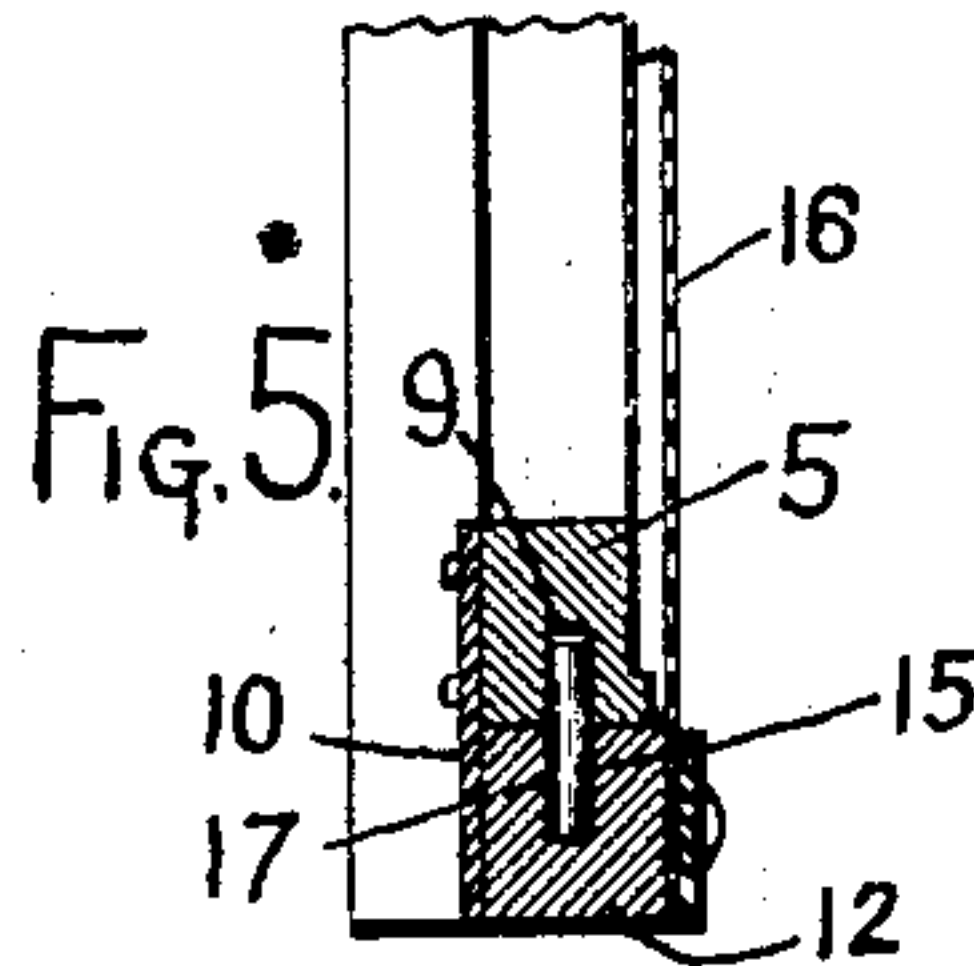


Fig. 5.

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WINDOW-SCREEN.

SPECIFICATION forming part of Letters Patent No. 738,108, dated September 1, 1903.

Application filed September 29, 1902. Serial No. 125,182. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. HENKEL, a citizen of the United States, residing at Nashville, Davidson county, Tennessee, have invented certain new and useful Improvements in Window-Screens, of which the following is a specification.

This invention, pertaining to improvements in window-screens, will be readily understood from the following description, taken in connection with the accompanying drawings, in which—

Figure 1 is an interior elevation of a window fitted with my improved screen; Fig. 2, a perspective view of the screen detached from the window and showing its interior face, a portion of the frame of one of the screen members appearing in vertical transverse section; Fig. 3, a perspective view showing the exterior face of the detached screen; Fig. 4, a horizontal section of the screen in the plane of line *a*; Fig. 5, a vertical transverse section of the screen and a portion of the window-sash in the plane of line *b*, and Fig. 6 a vertical longitudinal section of a portion of the top rails of the screen-frames in the plane of line *c*. Fig. 5 is upon a smaller scale than Fig. 6, but upon a larger scale than the remaining figures of the drawings.

This screen is designed to take position in the window-frame inside the plane of the inner window-sash, and it is hinged to the window-frame, so that it can be swung inwardly to permit the sash to be lowered, and it is extensible sidewise to suit varying widths of windows.

In the drawings, 1 indicates the window-casing; 2, the inner and lower sash, shown in upward open position; 3, a hinge-strip secured against the face of the inner stop at one side of the window-casing, this strip extending from the sill upwardly to a point somewhat above the lower edge of the inner sash 2 when the latter is up and open; 4, hinge members upon this hinge-strip; 5, the first member of the screen, the same consisting of a hinge-stile, an outer stile, a top rail, and a bottom rail, the width of this screen member being somewhat in excess of half the window widths and its height being such that it will extend from the sill upwardly to an overlapping position against the face of the

lower rail of the inner sash 2 when the latter is up, the bottom rail of this screen member being disposed a sufficient distance above the window-sill to permit the lower rail of a second screen member to lie under it, as indicated in Fig. 5; 6, hinge members on the hinge-stile of this first screen member uniting it to the hinges on hinge-strip 3, whereby the entire screen may be opened inwardly, the hinges being preferably of detachable character, so that the screen may be bodily removed from the window-casing; 7, the screen-cloth of the first screen member; 8, a groove extending longitudinally along in the upper surface of the top rail of screen member 5; 9, a similar groove extending along in the lower surface of the bottom rail of that screen member, it being noted that this bottom rail stands some distance above the window-sill; 10, a curtain projecting downwardly from the rear portion of the bottom rail of the first screen member 5 and closing the gap between that rail and the sill; 11, a stop-strip forming an outer reinforcement of the outer stile of the first screen member 5, this stop-strip extending from the sill upwardly to a point somewhat below the top of the upper stile of screen member 5, the upper end of this stop-strip forming a rest for the sash 2; 12, the second screen member, the same being formed with an outer and an inner stile and a top and bottom rail, the top rail of this screen member overlying and being rearwardly flush with the top rail of the first screen member and its lower rail underlying the bottom rail of the first screen member, whereby the second screen member 12 may be slidingly adjusted inwardly and outwardly to cause the width of the screen to suit the width of the window; 13, the inner stile of the second screen member, the same lying in a plane forward of the general plane of the second screen member and against the inner face of the cloth of the first screen member; 14, a groove extending along the lower surface of the upper rail of the second screen member in the plane of groove 8 in the top rail of the first screen member; 15, a groove in the upper surface of the lower rail of the second screen member in the plane of groove 9 in the lower rail of the first screen member; 16, the screen-cloth on the second screen member, the same over-

lying the inner face of the cloth of the first screen member; and 17, pins cooperating with the grooves in the top and bottom rails of the screen members, the first screen member having near its outer edge a pin projecting upwardly into the groove 14 of the second screen member and having at its bottom edge a pin projecting downwardly into the groove 15 of the second screen member, while the second screen member carries at its top and again at its bottom near its inner edge a pin projecting into the contiguous groove of the first screen member, these latter pins being disposed between the hinges of the screen and the pins carried by the first screen member.

In adjusting the screen to fit the width of the window the second screen member slides on the first screen member, the pins sliding in the grooves and preventing lateral displacement of the screen members with reference to each other. It is to be noted that the second screen member 12 has greater vertical height than the first screen member 5, the rails of the latter coming between the rails of the former, but that both top rails are rearwardly flush with each other, so as to close against the sash 2. When the screen is extended, this would result in an opening between the window-sill and the lower rail of the first screen member; but the curtain 10 keeps this opening always closed. The lower rail of the second screen member slides in the angle formed by the curtain 10 and the lower rail of the first screen member. The lower edge of the sash rests upon stop-strip 11 and projects downwardly past and against the upper edge of the upper rail of the first screen member. The inner stile of the first screen member comes against the hinge-strip 3, and the outer stile of the second screen member comes against the window-casing, and it is thus seen that no opening is present for the entrance of insects. The adjustment of the screen to fit the width of the window need be made but once for a given window. To close the sash, it is only requisite to swing the screen inwardly, so as to be free of the sash. The screen after being swung inwardly may be left in position, or it may be detached at the hinges. In first attaching this screen to a window it is only necessary to tack the hinge-strip 3 to the window-casing and extend the screen to fit the width of the window.

I claim as my invention—

55 1. In a window-screen, the combination, substantially as set forth, of a first screen member with top and bottom rails, a second screen member with top and bottom rails telescopically engaging above and below the first screen member, the rear recesses of said rails being flush with each other, cooperating guiding devices upon the cooperating rails, a curtain projecting downwardly from the bottom rail of the first screen member and engaging the rear surface of the bottom rail of the second screen member, such screen being adapted to seat against the inner face of the lower

window-sash when the sash is raised, and a stop upon the rear of the screen structure to engage below said sash and having its upper surface below the line of juncture between the top rails of the screen. 70

2. In a window-screen, the combination, substantially as set forth, of a first screen member with top and bottom rails, a second screen member with top and bottom rails telescopically engaging above and below the first screen member, the rear recesses of said rails being flush with each other, a curtain projecting downwardly from the bottom rail of the first screen member and engaging the rear surface of the bottom rail of the second screen member, such screen being adapted to seat against the inner face of the lower window-sash when the sash is raised, a stop upon the rear of the screen structure to engage below said sash and having its upper surface below the line of juncture between the top rails of the screen, grooves extending along the meeting faces of the rails of the screen member, and a pin carried by each rail and projecting into the groove of the contiguous rail. 80 85 90

3. In a window-screen, the combination, substantially as set forth, of a first screen member having stiles and top and bottom rails, a second screen member having a top rail overlying the top rail of the first screen member and a bottom rail underlying the bottom rail of the first screen member and having an inner stile overlying the face of the first screen member, a curtain projecting downwardly from the bottom rail of the first screen member and engaging the rear face of the bottom rail of the second screen member, and a stop carried on the inner side of the screen below the top edge thereof and adapted to stop a window-sash with its lower edge overlapping the rear upper portion of both screen members. 95 100 105 110

4. In a window-screen, the combination, substantially as set forth, of a hinge-strip adapted to be attached to a window-casing inwardly of the lower sash of the window, a screen hinged thereto and adapted to close against the inner face of the lower sash when raised, and a stop carried by the screen and serving to engage the lower edge of the lower sash when the same is open and engaging the rear upper portion of the screen. 115 120

5. In a window-screen, the combination, substantially as set forth, of a hinge-strip separably secured to the window-casing inwardly of the lower sash, a screen hinged thereto and resting upon the window-sill and having a top rail against the inner lower portion of the sash when raised, and a stop carried by the screen and engaging under the lower edge of the sash when in position to lap upon the top rail of the screen. 125

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